

# DR. EVA C. HERBST

## PEER-REVIEWED PUBLICATIONS \* DENOTES CO FIRST AUTHOR

---

- 2025 | Lappen S, Siegert P, Raiss P, Denard PJ, Werner BC, Griffin J, Shah A, Poltaretskyi S, Metcalfe N, **Herbst EC**, Moroder P. Influence of humeral liner constraint in reverse total shoulder arthroplasty on simulated range of motion in patients with various posture types – a modeling study. [The Hive Muskuloskeletal Journal](#).
- 2024 | Moroder P, **Herbst EC**, Pawelke J, Lappen S, Schulz E. Large variability in the degree of constraint of reverse total shoulder arthroplasty liners between different implant systems. [Bone & Joint Open](#).
- 2024 | Akguen D, Gebauer H, Paksoy A, Schafer F, **Herbst EC**, Karczewski D, Pastor MF, Moroder P. Differences in Osseous Shoulder Morphology, Scapulothoracic Orientation, and Muscle Volume in Patients With Constitutional Static Posterior Shoulder Instability (Type C1) Compared With Healthy Controls. [Am. J. Sports Medicine](#).
- 2024 | Webb NM, Fornai C, Krenn VA, Watson LM, **Herbst EC**, Haeusler M. Gradual exacerbation of obstetric constraints during hominoid evolution implied by re-evaluation of cephalopelvic fit in chimpanzees. [Nature Ecology & Evolution](#).
- 2023 | Merten LJF, Manafzadeh AR, **Herbst EC**, Amson E, Tambusso PS, Arnold P, Nyakatura JA. The functional significance of aberrant cervical counts in sloths: insights from automated exhaustive analysis of cervical range of motion. [Proc. R. Soc. B](#).
- 2023 | **Herbst EC\***, Evans LA\*, Felder AA, Javaheri B and Pitsillides AA. 3D profiling of mouse epiphyses across ages reveals new potential imaging biomarkers of early spontaneous osteoarthritis. [J. Anat](#)
- 2023 | Demuth OE, **Herbst EC**, Polet DT, Wiseman ALA, Hutchinson JR. Modern three-dimensional digital methods for studying locomotor biomechanics in tetrapods. [J. Experimental Bio](#).
- 2022 | **Herbst EC**, Lautenschlager S, Fioritti N, Meade L, Scheyer TM. A toolbox for the retrodeformation and muscle reconstruction of fossil specimens in Blender. [Royal Society Open Science](#)
- 2022 | **Herbst EC**, Eberhard E, Richards C, Hutchinson JR. In vivo and ex vivo range of motion in the fire salamander *Salamandra salamandra*. [J. Anat](#).
- 2022 | **Herbst EC\***, Eberhard E\*, Hutchinson JR, Richards CS. Spherical frame projections for visualizing joint range of motion, and a complementary method to capture mobility data. [J. Anat](#).
- 2021 | **Herbst EC**, Lautenschlager S, Bastiaans D, Miedema F, Scheyer TM. Modeling tooth enamel in FEA comparisons of skulls: comparing common simplifications with biologically realistic models. [iScience 24\(11\)](#)
- 2021 | **Herbst EC**, Felder AA, Evans LAE, Ajami S, Javaheri B, Pitsillides AA. A new straightforward method for semi-automated segmentation of trabecular bone from cortical bone in diverse and challenging morphologies. [Royal Society Open Science 8\(8\)](#), figure featured on [journal cover](#).
- 2020 | Ortega-Jimenez VM, **Herbst EC**, Leung MS, and Dudley R. Natural barriers: waterfall transit by small flying animals. [Royal Society Open Science 7201185](#)

- 2019 | **Herbst EC**, Doube M, Smithson TR, Clack J, and Hutchinson JR. Bony lesions in early tetrapods and the evolution of mineralized tissue repair. *Paleobiology* 45(4)
- 2018 | **Herbst EC** and Hutchinson JR. New insights into the morphology of the Carboniferous tetrapod *Crassigyrinus scoticus* from CT. *Earth Environ. Sci. Trans. R. Soc. Edinb.* 109(1-2)